

Amendments to the Specification:

Please replace the paragraph beginning at page 1, line 5, with the following rewritten paragraph:

This application is related to the following applications filed on even date herewith:

1. U.S. Patent Application Serial No. 09/629,696, filed August 1, 2000 in the names of Yee S. Ng et al, and entitled EDGE ENHANCEMENT OF GRAY LEVEL IMAGES.
2. U.S. Patent Application Serial No. 09/629,994, filed August 1, 2000 in the names of Yee S. Ng et al, and entitled EDGE ENHANCEMENT PROCESSOR AND METHOD WITH ADJUSTABLE STRENGTH OF GRAY LEVEL OUTPUT.
3. U.S. Patent Application Serial No. 09/630,435, filed August 1, 2000 in the names of Hwai-Tzuu Tai et al, and entitled IMAGE RECORDING APPARATUS AND METHOD PROVIDING PERSONALIZED COLOR ENHANCEMENT.
4. U.S. Patent Application Serial No. 09/629,993, filed August 1, 2000 in the names of Hwai-Tzuu Tai, and entitled GRAY LEVEL HALFTONE PROCESSING.

Please replace the paragraph beginning at page 6, line 11, with the following rewritten paragraph:

The modified input contone data is also passed to the two screener or LUTs 18, 20 for halftone processing at the same time. In each of the screener LUT blocks, it is assumed that the input contone data is halftoned by only that screener (such as a very high frequency soft screen for text) under the control of a screening address calculator 22 that has input from the pixel clock and line clock. A halftone rendered value is the output from each of the screening blocks 18, 20. In the case of rational screens, the repeating calculated address of the halftone blocks for the two screen choices are not necessarily the same. Then a blending operation is done in processor 24 that takes the blending coefficients and the halftone values of all the

QR screens into consideration so a blended rendered halftone value (blended halftoned value) based on the result comes out. Since the edges of non-saturated text/graphics have a high likelihood to use mostly the high frequency soft pictorial screen (which employs a partial-dot ~~the~~ growth pattern) and while the interior of the larger text has a higher likelihood to use mostly the lower frequency (mixed-dot growth pattern) screen, fine details are preserved and the large area EP stability is achieved at the same time. Moreover, since the edges of non-saturated text are using higher frequency screens, it does not get degraded by normal lower frequency screen processing (it is almost like an anti-aliasing effect is done for non-saturated text and graphics). The blending of screens also reduces the artifacts at the boundary of image types. This also reduces the moire problem caused by scanning input images that have high frequency features and output with a fixed screen (screen angle, screen frequency) halftone screens.

Please replace the paragraph beginning at page 7, line 1, with the following rewritten paragraph:

AS As noted in U.S. Patent No. 5,694,224 in gray level printing, each pixel has the capability to be rendered in several different dot sizes or densities, and thus different gray levels. The number of gray levels is at least three whereas in a binary system only two levels are possible, background and highest density. However instead of simply providing each pixel with an independent gray level, several pixels may be organized together to form a super pixel, or cell. Each of the pixels in a cell is then provided with a gray level. The human visual response integrates the various gray levels of the individual pixels in the cell to a single perceived gray level for the cell. This is similar to the basic concept of binary halftoning. The number of tone ~~skills~~ levels for a cell is increased greatly, however, due to the number of different gray levels available for each pixel. For example, instead of only the two levels provided in binary halftoning for each pixel, 256 levels (including zero) can be provided with gray level printing for each pixel in the cell. The formation of the dots in the pixels of the cell can be performed in a number of different manners to achieve different desired results. The dots can be formed as "full" dot, "partial" dot, "mixed" dot or fixed dot to provide gray level halftoning. The partial dot formation process

U.S. Application No. 09/628,397 – Filed: August 1, 2000

Amendment Dated: March 24, 2004

Reply to Office Action Dated: January 15, 2004

OB

and mixed dot formation process are described in the aforementioned U.S. Patent No. 5,694,224.
